

REMARKS

The claims have not been amended. Claim 2 was previously canceled, and claims 4-6 and 10-22 were previously withdrawn. Accordingly, claims 1, 3, and 7-9 are currently pending in the application, of which claim 1 is an independent claim.

In view of the following Remarks and the Declaration Under 37 CFR § 1.132 submitted herewith, Applicant respectfully requests reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

Rejections Under 35 U.S.C. § 103

Claims 1, 3, and 7-8 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Japanese Patent Application Publication No. 10-214614 issued to Inoue ("Inoue"). Claim 1 also stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Chinese Patent Application Publication No. 2473755 ("CN '755"). Applicant respectfully traverses this rejection for at least the following reasons.

Claim 1 recites, *inter alia*:

wherein the negative electrode lead comprises a planar portion electrically coupled to the negative electrode plate and a curved portion arranged out of plane from the planar portion, the curved portion having the same width as the planar portion, and the current interrupter is arranged in the curved portion of the negative electrode lead, and

wherein the current interrupter has a cross-sectional area that is smaller than a cross-sectional area of an adjacent portion of the planar portion. (emphasis added)

The examiner concurs that both Inoue and CN '755 fail to disclose at least these features. Specifically, the examiner states that Inoue and CN '755 fail to disclose "the specified curved portion out of plane from a planar section." See Office Action, page 5, 6. To remedy the shortcomings of these references, the examiner then cites to In re Dailey, 149 USPQ 47 in

support of the proposition that “changes in shape is [sic] a matter of choice ... absent persuasive evidence that the particular configuration of the claimed electrode lead is significant or critical.” Office Action, page 5, 6 (emphasis added). The examiner also cites to In re Seid, 73 USPQ 431 in support of the proposition that “aesthetic design changes having no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art.” Office Action, page 5, 6 (emphasis added).

However, the shape of a product may be of patentable significance where “it results in a product which is distinct” over the prior art. MPEP, Section 2144.04 (citing to Ex parte Hilton, 148 USPQ 356 (Bd. App. 1965)). Read together, Hilton, Dailey, and Seid stand for the proposition that shape and/or configuration changes that are more than just aesthetic, and provide some mechanical function, may render a claimed invention patentable over prior art.

This proposition, as applied to the present invention recited in claim 1, supports the patentability of claim 1 over the cited references. Specifically, the arrangement of the current interrupter in the curved portion of the negative electrode lead offers mechanical advantages over the cited references. Such mechanical advantages are described in the Declaration Under 37 CFR § 1.132 submitted herewith. Specifically, in paragraph 14, Applicant declares that “in the case of over-current, the arrangement of the reduced cross-section current interrupter 36a in the higher-stress curved portion of the negative electrode lead 36 would best ensure ‘a disconnection’ at the current interrupter 36a.” Further, in paragraph 15, Applicant declares that:

Heat generation increases electrical resistance through the current interrupter, and also mechanically weakens the current interrupter. Because the current interrupter has a smaller cross-section than the negative electrode lead, and has a greater mechanical stress as a result of the eccentric loading, mechanical weakening of the current interrupter due to the generated heat causes the current interrupter to break or disconnect from the negative electrode lead quickly to avoid an explosion from thermal runaway.

In the Advisory Action, the examiner asserts that the “apparent mechanical advantages ... are completely expectable when a change in shape or configuration does occur.” However, it is not merely the inclusion of a curved portion in a negative electrode lead, but the arrangement of the current interrupter in the curved portion, thus improving the operation of the current interrupter, that distinguishes the present invention from the cited references.

Further, in the Advisory Action, the examiner submits that the inclusion of a curved portion is an effect-result scenario, whereby the concentrated stress at a particular location is an expected result of the eccentric axial loading. However, the examiner offers no support that arranging a current interrupter in a location having a concentrated and mechanically-applied stress would be of any particular advantage in the operation of the current interrupter. Absent this support, the pending rejections cannot be maintained.

In view of these advantages, neither Dailey nor Seid are relevant to remedy the shortcomings of Inoue and CN '755 with respect to claim 1. Accordingly, since claim 1 is not obvious over Inoue and CN '755, claim 1 is allowable over these references. Moreover, claims 3 and 7-9 depend from allowable claim 1, and are allowable for at least this reason.

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Inoue and/or CN '755 as applied to claim 1 above, and further in view of U.S. Patent Application Publication No. 2005/0171383, applied for by Arai, *et al.* (“Arai”). Applicant respectfully traverses this rejection for at least the following reasons.

Applicant respectfully submits that claim 1 is allowable over Inoue and/or CN '755, and Arai fails to cure the deficiencies of Inoue and/or CN '755 noted above with regard to claim 1. Hence, claim 9 is allowable at least because it depends from an allowable claim 1.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claim 1. Claims 3 and 7-9 depend from claim 1 and are allowable at least for this reason. Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention, Applicant respectfully submits that independent claim 1, and all the claims that depend therefrom, are allowable.

CONCLUSION

Applicant believes that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated grounds for rejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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